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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,064	06/20/2003	Robert A. Baydo	085516-9010 (US00)	5519
23409	7590	07/24/2007	EXAMINER	
MICHAEL BEST & FRIEDRICH, LLP			SAYALA, CHHAYA.D	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/601,064	BAYDO ET AL.
	Examiner	Art Unit
	C. SAYALA	1761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10/02&12/19/2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-84 is/are pending in the application.
 - 4a) Of the above claim(s) 42-51 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-41 and 52-84 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/5&12/19/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 37, 55-62, 69-71, 78 and 80 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Parentheses in the claims are indefinite. The metes and bounds of a claim are obfuscated by parentheses because it is not clear whether applicant intends the claim to be read on the content of the claim itself or just the content of the parentheses.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-28, 30-41, 52-60, 62-67, 69-76, 78-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shastry et al. (US Pub. 2006/0110551, filing date 8/5/2002) in view of WO 01/94116 and Pasternak (US Patent 4,531,292) and further in view of Russell et al. (US Patent 6623553) and Reitnauer (US Pub. 2003/0101902).

Art Unit: 1761

Shastry et al. disclose at paragraph [0034], a composition that is a water-based pigmented ink for use on an edible surface, comprising water at 30-85% by weight, a pigment in an amount 3-35%, and dispersants such as glycerine or polyethylene glycol or other polyols, between 1-50 wt%. The invention also teaches the inclusion of ethanol, and that inks generally have a viscosity of about 1 to about 45 cps, surface tension of about 15 to about 50 dynes/cm (see paragraph [0040]).

Concerning claims 53 and 54, see paragraph [0019], which shows the inventive ink can be used for snack foods and confectionaries:

[0019] Any edible substrate that can be coated with a modified polarity coating to enhance the compatibility of its surface with water-based inks may be used with the invention: including pharmaceuticals, snack foods, confectioneries, and pet foods. The edible substrate may be film-coated. Preferred embodiments are directed to printing on panned sugar shell confectionery, which includes soft panned confectionery, such as jelly beans, which have a sugar shell agglomerated thereon, and hard panned sugar shell confectionery, such as M&M's.RTM. brand peanut and chocolate candies. In preferred embodiments the confectionery surface has a non-planar shape, such as a lentil or spheroid shape. These confectionery, as printing substrates, pose a particular problem in the printing of high resolution composite images, particularly where there is some variation in the size and/or shape of the confectioneries.

With regard to optimizing the viscosity of the product based on the polarity (and obviously porosity) of the surface see paragraph [0020], which discloses:

[0020] Ordinarily in the manufacture of hard panned sugar shell candy, successive layers of syrup are coated onto a center

material in a rotating pan and dried. The details of the hard panning process are well known in the art and will not be elaborated upon herein. After completing application of the syrup layers, a wet wax coating followed by a dry wax coating develops a high gloss finish on the hard panned surface. According to the prior art, printing is then performed on the wax coating using contact type printing processes such as a pad or offset process. In such cases, the problems posed by the low polarity surface can be addressed according to the prior art by employing higher viscosity inks. However, if an ink-jet compatible water-based ink is used, the lower viscosity inks have a tendency to bead up on the non-polar surface, causing bleeding of the printed image which can lead to smearing.

See paragraph [0038], which discloses various surfactants that are used in the edible inks, namely, anionic surfactants, cationic surfactants and amphoteric surfactants.

With regard to claims 4 and 5, note that Shastry et al. teach non-aqueous solvent based inks, disclosed at paragraphs [0036] to [0037], and to use lesser amounts of water or none at all. It would have been obvious to one of ordinary skill in the art, therefore, to optimize the water content between these ranges as shown by the reference, since Shastry et al. disclose both embodiments, water-based and solvent-based, and as evidenced by the instant claims whose scope includes a wide range of water content and whose numbers recite variously every range possible within the scope of the reference, determining the necessary water content for optimum performance would have been within the skill of the artisan.

With regard to claim 7, Shastry et al. enables the use of specific colors recited herein by its disclosure of using *any* FD&C colors.

Thus Shastry et al. disclose some of the limitations as claimed but not all of them, such as the amounts as claimed, or the glycol and glycerine both together.

WO 01/94116 teaches at page 7, line 20+, an edible ink-jet ink that contains a food-grade pigment, glycerine *and* propylene glycol, water and a surfactant. The amounts at page 28, show a glycerol and glycol amount of 1-48% and water between 30 and about 75%. Edible inks are combined with surfactants *to make the ink compatible with the surface it is being applied to*, the surfactant being either anionic, cationic or amphoteric. Surfactants are listed at lines 17-21 at page 29. Page 30, line 25 into page 31, include natural colorants and food colors that are used in the invention. The addition of ethanol is shown at page 28, lines 24+, *to enable the ink to dry quicker*. Such benefits would have motivated one of ordinary skill in the art to include these in the Shastry et al. composition, and reinforces such inclusion already disclosed by that reference.

At page 27, lines 20+, the reference (WO '116) shows adding dispersants or a combination of dispersants such as glycerine *and* propylene glycol, ethanol, surfactant and water as a preferred embodiment. In fact, Pasternak also teaches such a composition being a combination of water, glycerol, propylene glycol and ethanol in a colorable and edible ink composition. See col. 16, lines 20-25. Note too, the FD&C colors disclosed. Pasternak therefore, taken in combination with the above references,

establishes that the use of these elements in an edible liquid were known at the time the invention was made.

With regard to claim 40, Shastry et al. discloses natural colorants used in edible inks as being FDA approved, but do not disclose details of such natural colorants (paragraph [0006]). However, Russel et al. teach such specific colorants at col. 4, lines 52-64 in edible ink compositions and to incorporate these in Shastry et al. would have required no more than routine skill. Russell et al. teaches such edible inks for confectionaries, cakes, etc. as detailed at col. 5, lines 50-60, and also disclose that (col. 2, lines 43-52):

The edible ink preferably has a viscosity and a density sufficient to spread evenly over a master printing plate, adhere to the master printing plate, and subsequently transfer from the master to an edible article or a transfer sheet to form an image layer thereon. The viscosity of the edible ink may vary widely depending, for example, on the characteristics of the ink receptive layer on the master, the characteristics of the surface of the edible article or transfer sheet, the required drying time, and the like

which provides guidance to the person of ordinary skill, who based on the viscosity of Shastry et al. and WO '116, would have been motivated to optimize within the ranges given, as necessary. Claims in this rejection and presented here for examination, although numerous, are similar in content, since they are presented here in varying amounts and components, in numerous permutations and combinations, and are deemed to have been addressed and treated adequately by the above references taken

in combination, in the limited available time, and are obvious for the above given reasons.

With regard to claims pertaining to the "silt density index" and the impurities (claims 11-13, 20, 34-38, 55, 57, 64, 69-71, 78-80), Reitnauer et al. states at paragraph [0013]:

By "edible" in reference to a component is meant that the component is listed as a Generally Recognized as Safe direct food additive (GRAS) in section 21 of the Code of Federal Regulations or is EAFUS-listed, i.e., included on the Food and Drug Administration's list of "everything added to food in the United States." An "edible ink" is an ink that contains less than 100 ppm by weight of any impurities, i.e., any components that are not listed as GRAS or are not EAFUS-listed

thus rendering the motivation to make silt density index and inorganic ion content as low as can be made.

With regard to claims 14, 16 and 59 which recite the limitation:

"wherein the colored fluid has a Brookfield viscosity at 60°C that changes by no more than about 2 cps over a shear rate range from 10 to 45 rpm",

the Office is not equipped to take prior art products and manufacture them, subject them to a shear rate from 10 to 45 rpm and then observe the viscosity so that it changes no more than **2 cps** and this at 60°C. That burden is being shifted to applicant who has

chosen to describe his product in terms that cannot be compared by this Office with prior art products simply because the characteristics he has chosen to use in order to distinguish his product, which otherwise appears to be well described by prior art in its other limitations, as described above, cannot be compared with prior art by this Office.

The same may be said of claim 58, which describes specific gravity of the fluid.

3. Claims 29 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shastry et al. (US Pub. 2006/0110551, filing date 8/5/2002) in view of WO 01/94116 and Pasternak (US Patent 4,531,292) and further in view of Russell et al. (US Patent 6623553) and Reitnauer (US Pub. 2003/0101902) taken with Naor et al. (US Patent 6299374).

With regard to the use of paraben in the composition (claims 29 and 61), Shastry et al. teach preservatives as conventional additives to any edible ink composition (paragraph [0039]), but no other details. Reitnauer et al. teach such preservatives at paragraphs [0028] to [0029], wherein Reitnauer et al. teaches that such paraben compounds are stabilizers against oxidation of ink components. Similarly Naor et al. teach paraben as a preservative in an edible ink or coloring liquid composition. See col. 6, line 55 to col. 7, line 3. Such disclosure enables one of ordinary skill in the art to choose paraben as the conventional additive to function as the preservative in Shastry et al.

4. Claims 68 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shastry et al. (US Pub. 2006/0110551, filing date 8/5/2002) in view of WO 01/94116 and Pasternak (US Patent 4,531,292) and further in view of Russell et al. (US Patent 6623553) and Leshik et al. (US Patent 4307117) taken with Vassiliou (US Patent 5073399).

With regard to claims 68 and 77, which recite sodium docusate, Leshik which is drawn to the use of curcumin, found in oleoresin turmeric and provides coloring to food articles, and stabilizing curcumin by adding dispersants such as dioctyl sodium sulfosuccinate, as well as surfactants at col. 4, lines 35-45, that are similar to those shown at page 29 of the WO '116 patent, and paragraph [0038] of Shastry et al., and this being the case, the docusate, shown by Leshik, is certainly a functional equivalent to those others disclosed by and common to all 3 references, the use of which as well as the substitution of which would have been obvious to the artisan. The same may be said of the Vassiliou reference who additionally, discloses the sulfosuccinate as a "common food grade emulsifier", adding to the motivation to use such in the primary references, which teach the surfactant being either anionic, cationic or amphoteric.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-6, 9-10, 12, 52 and 54 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15, 17 and 39-40 of copending Application No. 11/149,660 in view of Ogawa et al (U.S. Pat. No. 4,512,807).

With regard to claim 1 of instant application '064, applicant discloses a food grade colored liquid comprising the similar ingredients as claim 1 of co-pending application '660 without the surface tension modifier. However, the claim as filed does not exclude surface tension modifier. Ogawa et al teach an aqueous ink composition for ink-jet printing comprising surface tension modifiers including anionic, cationic, non-ionic and amphoteric surface active agents (col 8 lines 38-46) for their art recognized function. Ogawa et al teach a genus of surface active agents under which the species claimed by applicant belong. It would be obvious to one of ordinary skill in the art to modify the instant application '064 by adding surface tension modifiers as taught by

Ogawa et al for their art recognized function. With regard to claim 12 of '064, applicant recites an inorganic salt content of no more than 0.5wt% which incorporates a range from 0-0.5%. Copending application '660 in claim 17 recites an inorganic salt content of no more than 0.1 wt%, which incorporates 0-0.1%. This range is within the instantly claimed range of instant application '064.

This is a provisional obviousness-type double patenting rejection.

6. Claims 1-41, 52-84 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15, 17 and 39-40 of copending Application No. 10/918197 in view of Zou et al (U.S. Pat. No. 5800601).

The claims of '197 extensively overlap with those of the instant claims, both in components and amounts. What the instant claims do not recite is the shellac. However, Zou et al. teach shellac in combination with a composition that contains food colorant, dispersed in a carrier and the shellac added to this for its binder properties. It would have been *prima facie* obvious to do the same and incorporate such in the instant claims for its art recognized function in inks or colorants.

Response to Arguments

Applicant's arguments with respect to claims 1-41, 52-84 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chhaya Sayala, Ph.D. whose telephone number is (571) 272-1405. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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